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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/637,191	08/08/2003	Jurgen Muller	P2001,0082	3966
24131	7590	08/18/2005	EXAMINER	
LERNER AND GREENBERG, PA			NGUYEN, PHILLIP	
P O BOX 2480			ART UNIT	
HOLLYWOOD, FL 33022-2480			PAPER NUMBER	
			2828	

DATE MAILED: 08/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/637,191	Applicant(s) MULLER, JURGEN	
	Examiner Phillip Nguyen	Art Unit 2828	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 July 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
6) <input type="checkbox"/> Other: _____ |
|---|--|

DETAILED ACTION***Response to Arguments***

1. Applicant's arguments with respect to claims 1-12 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, 4, and 8-12 are rejected under 35 U.S.C. 102(b) as being anticipated by

Johnson ('683).

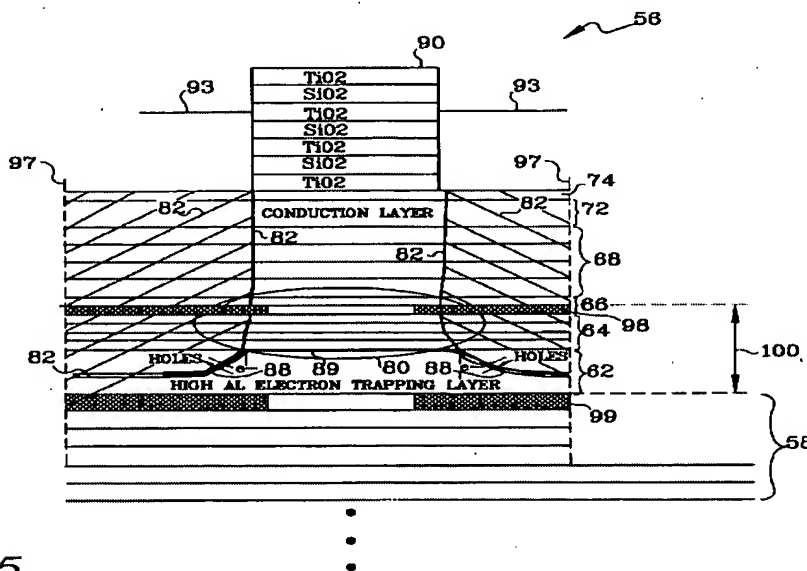


Fig. 5

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With respect to claim 1, Johnson discloses in Fig. 5 a semiconductor laser comprising a vertical resonator formed by reflectors (90 and 58); a photon-emitting active layer (80) disposed between said reflectors; at least one current diaphragm (98 and 99) for laterally circumscribing a current flowing through said photon-emitting active layer; and mode-selective regions (82) extending from a vertical direction within said vertical resonator and laterally delimit said vertical resonator.

With respect to claim 2, Johnson further discloses a mesa and one of said reflectors (90) is formed in said mesa.

With respect to claim 4, Johnson discloses the current diaphragm is formed from an oxide (col. 6, lines 15-16).

With respect to claim 8-9, Johnson discloses said mode-selective regions have an electrical conductivity less than an electrical conductivity of said vertical resonator along a resonator axis and said mode-selective regions are implantation regions (abstract).

With respect to claim 10, Johnson discloses said vertical resonator has an edge area (97) and said mode-selective regions extend in said edge area and a surrounding region of said edge area of said vertical resonator.

With respect to claim 11, Johnson discloses said current diaphragm is at least two current diaphragms (98 and 99).

With respect to claim 12, Johnson discloses the semiconductor laser has a multilayer structure (from layers 58-90) and said mode-selective regions are formed within said multilayer structure.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3 and 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson ('683) in view of Choquette et al. ('577).

With respect to claims 3 and 5-6, Johnson discloses the claimed invention and also the mode-selective region defining an inner opening being larger than said current aperture (see Fig. 5) except for explicitly teaching the diameters of the mesa and aperture. Choquette discloses in Fig. 1 the claimed invention along with a mesa has a diameter of larger than 10 and a current diaphragm 20 defines a current aperture having a given diameter of larger than 3 μm (col. 9, lines 59-65) except for the mode-selective region being within said resonator. For the improvement of the laser device, it would have been obvious to the one having ordinary skill in the art at the time the invention was made to provide diameters of the mesa and current aperture larger than 10 μm and larger than 3 μm , respectively, because it is well known in the art to design such diameters.

With respect to claim 7, Johnson discloses in Fig. 5 the mode selective regions defining an inner opening being larger than said current aperture.

Citation of Pertinent References

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The patent to Johnson discloses Bandgap Isolated Light Emitter, U.S. Patent No. 6064683

The patent to Choquette et al. discloses Efficient Semiconductor Light Emitting Device and Method, U.S. Patent No. 5493577

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Communication Information

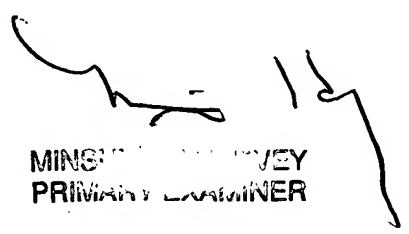
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phillip Nguyen whose telephone number is 571-272-1947. The examiner can normally be reached on 9:00 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MINSUN HARVEY, can be reached on 571-272-1835. The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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MINSUN HARVEY
PRIMARY EXAMINER